

PTO/SB/08a (07-05)
Approved for use through 07/31/2008. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

	Under th	e Paperno PAP	on Act of 1995, r	o persons are req	uired to respond to a collection of informat	tion unless it contains a valid OMB control number.	
Sub	bstitute	for form 1449A	/PTO		Complete if Known		
					Application Number	10/722,587	
INFORMATION DISCLOSURE					Filing Date	November 28, 2003	
S	TAT	EMENT B	Y APPLIC	ANT	First Named Inventor	ROSENBERG, Robert D.	
					Art Unit	1623	
(use as many sheets as necessary)					Examiner Name	Not yet known	
Sheet		1	of	3	Attorney Docket Number	P-6170-US	

	U.S. PATENT DOCUMENTS						
Examiner	Cite No. 1	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where		
Initials*	No. 1	Number-Kind Code <sup>2 (Flanowe)</sup>	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear		
	Α	US-2004/0043447	04-03-2004	SARIBAS, et al			
		US-					
		us-					
		US-					
		us-					
		us-					
		US-					
		US-					
	T	US-					
	T	us-					
	1	us-					
		US-					
		us-					
		US-					
	T	us-					
	T	US-					
		US-					
	T	US-					

	FOREIGN PATENT DOCUMENTS								
Examiner	Cite	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or	Pages, Columns, Lines,	Τ.			
Initials*	Cite, No.	Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	MIM-DD-1111	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	۳			
						0			

Examiner	Date	
Signature	Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 000. Draw line through citation if not in ponformance and not considered, include copy of this form with next commencation is applicable. Applicable values citation designation number (opticable). See Kinds Coding and Commencation of the Commencation of the Commencation of the Commencation of the Vision of the

The collection of information is required by 37 CFR 197 and 118. The information is required to obtain or relatin a boueful by the public which is to life (and by the LISPTO to process) an application. Confidensisty is governed by 3.5 LS CT 192 and 27 CFR 114. This collection is bestimated to base 2 hours to complete, noticed an application of the complete in the

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PTO/SB/08b (07-05)
Approved for use through 08/30/2006. OMB 0651-0031
U.S. Patent and Tradernark Office: U.S. DEPARTMENT OF COMMERCE

Substi	itute for form 1449	в/РТО		Complete if Known		
				Application Number	10/722,587	
INFO	DRMATION	DISCLO	SURE	Filing Date	November 28, 2003	
STA	TEMENT B	Y APPLI	CANT	First Named Inventor	ROSENBERG, Robert D.	
				Art Unit	1623	
(u	ise as many she	ets as necess	ary)	Examiner Name	Not yet known	
Sheet	2	of	3	Attorney Docket Number	P-6170-US	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	В	Aikawa, et al (2001) "Multiple isozymes of heparan sulfate/heparin GlcNAc N- deacetylase/GlcN N-sulfotransferase. Structure and activity of the fourth member, NDST4." J. Biol. Chem. 276: 5876-82	
	С	Habuchi, et al (2000) "The occurrence of three isoforms of heparan sulfate 6-O- sulfotransferase having different specificities for hexuronic acid adjacent to the largeted N-sulfoglucosamine." J. Biol. Chem. 275: 2859-68	
	D	Kovensky, et al (1999) "A synthetic heparan sulfate pentasaccharide, exclusively containing L-iduronic acid, displays higher affinity for FGF-2 than its D-glucuronic acid-containing isomers." Bioorg. Med. Chem. 7: 1567-80	
	E	Kuberan, et al (2002) "Analysis of heparan sulfate oligosaccharides with ion pair- reverse phase capillary high performance liquid chromatography-microelectrospray  ionization time-of-flight mass spectrometry." J. Am. Chem. Soc. 124: 8707-18	
	F	Leali, et al (2001) "Fibroblast growth factor-2 antagonist activity and angiostatic capacity of sulfated Escherichia coli K5 polysaccharide derivatives." J. Biol. Chem. 276: 37900-08	
	G	Lemieux, et al (1979) "The azidonitration of tri-o-acetyl-D-galactal" Can. J. Chem. 57: 1244-51	
	н	Li, et al (1977) "Biosynthesis of Heparin/Heparan Sulfate" J. Biol. Chem. 272(44): 28158-63	
		Shaklee, et al (1984) "Hydrazinolysis of heparin and other glycosaminoglycans." Biochem. J. 217: 187-97	
	-	Toshima and Tatsuta (1999) Chem. Rev. 93: 1509-91	
	J		
	к	Orellana, A., et al (1994) "Molecular cloning and expression of a glycosaminoglycan N- acetylglucosaminyl N-deacetylase/N-sulfotransferase from a heparin-producing cell line." J Biol Chem 269, 2270-6	
	L	Lloyd, A.G., et al (1971) "Embery, G. & Fowler, L.J. Studies on heparin degradation. I. Preparation of (35 S) sulphamate derivatives for studies on heparin degrading enzymes of mammalian origin." <i>Biochem Pharmacol</i> 20, 637-48	
	м	Campbell, P. et al. (1994) "Biosynthesis of heparin/heparan sulfate. Purification of the D-glucuronyl C-5 epimerase from bovine liver." J Biol Chem 269, 26953-8	

	,	
Examiner	Date	
Signature	Considered	

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered include copy of this form with next communication to applicant.

\*Applicant's unique critation designation number optionsals. \*Applicant surface critation exists in the conformal critation is attached.

Application temple resources or observable in the collection of electronic in regime to the collection of electronic or electronic in the collection of electronic in regime to collection of electronic in regime to collection or relation benefit by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior by the public which is to file (and by the superior between the superior by the s

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/08b (07-05)

Approved for use through 06/30/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE respond to a collection of information unless to ordians a valid OMB control number.

Substit	ite for form 1449	B/PTO		Complete if Known			
				Application Number	10/722,587		
INFO	RMATION	DISCLOS	SURE	Filing Date	November 28, 2003		
STA	TEMENT B	Y APPLIC	CANT	First Named Inventor	ROSENBERG, Robert D.		
				Art Unit	1623		
(us	e as many she	ets as necessa	ary)	Examiner Name	Not yet known		
Sheet	3	of	3	Attorney Docket Number	P-6170-US		

	NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, scala, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²				
	N	PIKAS, et al (1999) "Enzymes involved in biosynthesis and degradation of heparin- related polysaccharides, Trends in Glycoscience and Glytechnology, vol. 11 no. 61 303-308.					
	o	KUSCHE, et al (1991) "Biosynthesis of heparin. Use of Escherichia coli K5 capsular polysaccharide as a model substrate in enzyme polymer-modification reactions, Biochemical Journal vol. 275 no. 1 151-158.					
	Р	FORSBERG, et al (1999) "Abnormal mast cell in mice deficient in a heparin- synthesizing enzyme, Nature vol. 400 no. 6746 773-776.					
	a	HERNAIZ, et al (*2000) "Enzymatic modifications of heparan sulfate on a blochip promotes its interaction with antithrombin III, BBRC vol. 276 no. 1 292-297.					
	R	PEJLER, et al (1987) "Structure and affinity for antithrombin of heraoan sulfate chains derived from basement membrane proteoglycans. J Biol Chem vol 262 no. 1 5036-5043.					
	s	Camejo, et al (1992) "Binding of Low Density Lipoproteins by Proteoglycans Synthesized by Proliferating and Quiescent Human Arteial Smooth Muscle Cells." The Journal of Biological Chemistry. 14131-14137.					
	т	Galanina, et al (1998) "Determination of Carbohydrate Specificity of Monoclonal Antibodies against MUC1." Turnor Biol. 79-87.					
	υ	Van den Born, et al (1995) "Presence of N-Unsubstituted Glucosamine Units in Native Heparan Sulfate Revealed by Monoclonal Antibody." The Journal of Biological Chemistry 31303-31309.					
	v	Zhou, et al (1997) "Heparin-dependent Fibroblast Growth Factor Activities: Effects of Defined Heparin Oligosaccharides." European Journal of Cell Biology 71-80.					

Examiner	/Scarlett Goon/	Date	12/03/2008
Signature	700011011 000111	Considered	

EXAMINER: Initial if reference considered, whether or not distrion is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.
 Applicant is induse citation designation number (options). Applicant is to place a check mark here if English language Translation is attached.

Population is unique classified in designation interfere impossion. Application is designed by 37 CPR 1.97 and 1.98. The election of information is required by 37 CPR 1.97 and 1.98. The information is required to obtain or relatin a benefit by the public which is to lite (and by the USPT D) process) an application. Confidentially is governed by 53 LES. 172 and 7.79 Feb. 11. This collection is estimated by the confidential of the CPR 1.99 and 1.99 an

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.